**Abstract**

Rare earth type perovskite materials are widely used in the electronic devices due to their interesting physical properties. NdMnO3 has the Perovskite structure and is applicable in the magnetic memory storage device. The high purity type starting precursors are taken to prepare the rare earth type NdMnO3. The compound is synthesized by combustion method which is confirmed through X-ray diffraction. The crystallinity, crystallite size, lattice constants and cell volume have been calculated from XRD analysis. Surface morphology of the sample clearly depicts the uniform formation of clusters of nano particles. The electrical conductivity measurements indicate that NdMnO3 have better dielectric properties. It has the antiparallel spin orientation and hence it exhibits the antiferromagnetic property. The Energy Dispersive Spectroscopy analysis gives the chemical composition of the compound. The magnetic measurements were carried out through Vibration Sample Magnetometer. The linear and non-hysteric curve has been obtained from the VSM analysis. The result confirms the antiferromagnetic property of NdMnO3 compound. By tuning the bandgap of this rare earth perovskite material may emerge out the hybrid type perovskite solar cells.